

a depth of rain equal to 22.7 inches. The least falls of rain occurred at Holkham, Grantham, Cardington, and Gainsborough,—the mean of these places being 9.6 inches. The greatest number of rainy days occurred at Bowdon, Royston, Falmouth, and Ryde. The quantity of rain which fell during 1852 is so very remarkable, that we are glad to have an early opportunity of placing Mr. Glaisher's reduction before our readers:—that gentleman having kindly afforded us the means of doing so.

Fall of Rain in inches, 1852.

Names of Stations.	Fall in Inches	No. of Days.
Jersey - - -	43.4	171
Guernsey - - -	49.1	173
Helston - - -	45.4	183
Falmouth - - -	59.1	184
Truro - - -	52.5	161
Torquay - - -	50.0	175
Ventnor - - -	43.0	182
Ryde - - -	48.8	171
Chichester - - -	39.0	—
Southampton - - -	49.7	165
Royal Observatory - - -	31.4	155
Woolwich Arsenal - - -	31.7	—
St. John's Wood - - -	35.1	168
Abingdon, Berks - - -	36.7	—
Rose Hill, near Oxford - - -	38.0	173
Oxford University - - -	40.4	178
Stone - - -	31.3	182
Hartwell Rectory - - -	33.8	189
Linslade - - -	31.4	163
Cardington - - -	30.9	161
Bedford - - -	32.7	185
Norwich - - -	32.5	162
Grantham - - -	32.2	180
Derby - - -	33.7	183
Holkham - - -	30.3	173
Nottingham - - -	37.4	201
Hawarden - - -	40.2	186
Gainsborough - - -	25.5	175
Liverpool - - -	31.2	—
Wakefield - - -	33.5	213
Leeds - - -	28.4	—
Stonyhurst - - -	58.3	191
York - - -	27.3	157
Whitehaven - - -	50.0	—
Durham - - -	30.6	180
North Shields - - -	58.2	232
Glasgow - - -	45.5	188
Dunino - - -	31.3	133

I have not visited this station:
I think the gauge wrong.

11 in. fell in Dec.: average for
Dec., 3.8 in.
Average for the year at this
place, 20.8 in.

It will be seen from this, that, supposing the rain which fell through the year 1852 had rested on the surface of the country—it would have amounted to fifty inches in depth nearly over the counties of Devon and Cornwall—and to between 30 and 40 inches at most inland places. There would thus have been spread over the whole of England a depth of nearly 3 feet of water.

A few parallel examples of heavy falls of rain in this country will bring out the phenomena more strongly. Mr. Luke Howard, in his "Climate of London," informs us that in the latter half of June and the first half of July 1810 the amount of rain was 5.13 inches. At Kendal in 1782 83.5 inches of rain fell, the average result being 55 inches. At Perth, on the 3rd of August 1829, four-fifths of an inch of rain descended in half an hour—and Mr. Howard records the fact of 1½ inch of rain having fallen on the 8th May. In the last quarter of 1852 there fell—

	Inches.
October 4 Southampton - - -	1.9
" Uckfield - - -	2.1
" Midhurst - - -	1.8
November 6 Falmouth - - -	1.3
" 10 Nottingham - - -	1.7
" 13 North Shields - - -	1.6
December 17 Leeds - - -	1.3
" 19 Glasgow - - -	1.8

So that for remarkable falls of rain—and for a long continuance of wet—the year just past presents a very striking meteorological condition. The mean of an extended series of observations gives 31 inches as the annual quantity of rain between the latitudes 50° and 55°—the corrected means of the returns obtained gives 34. for 41852.—*Athenæum*.

New Jersey Zinc and Franklinite.*

Mineral enterprise in this country is rapidly rising to the ascendant. Capital is becoming more ready and anxious, if possible, to invest itself in iron, lead, zinc, copper, and coal mines, than in railroads, which have been, and are now the ascendant interest. It is confidently predicted by careful judges of the signs of the times that, within ten years, more capital will be invested in our mining operations than in our railroads. All the minerals we have named above, are in increased demand, and bear improving prices. The era of fancy mining, for years past potent in fortune-making to a few and in ruin to many, has had its day. Moneyed men are no longer found ready to invest their wealth in paper mines, having no particular existence beyond the ingenuity of their Wall-street creators, and, after a little lapse, to test if the cry for legitimate enterprise indeed meant legitimate, a new sort of enterprise is being inaugurated—to wit: a desire and determination on the part of men of knowledge and means, to enter upon the practical development of some of the vast, undoubted mineral resources of the country.

One mineral enterprise successfully, because energetically, taken hold of and prosecuted, has done more, within two or three years past, to induce the general interest now felt in mining projects, than all others we could name. We allude to the operations of the New Jersey Zinc Company, organized in the spring of 1848, and which, in the face of repeated failures for half a century past to turn the rich zinc mines of New Jersey to practical, profitable account, have been so successful, and that, too, in developing zinc in a more profitable form (paint) than was first contemplated, that its stock, representing \$1,200,000 capital, is now considerably above par, and eagerly sought for permanent investments. The success of this enterprise, opposed at first by so many obstacles; the prejudices of legislation, the hesitation of capital, the entire absence of experience in zinc mining and manufacture in this country, has inspired a score of enterprises, most of them legitimate, and many of them destined to great success and profit. It has certainly placed New Jersey in the front rank of mineral States, for, independent of the revelation of her wealth in zinc, it has led to a more thorough examination of her other mineral resources, which are many and rich. But the impetus inspired by the operations of the New Jersey Zinc Company, has not been confined to New Jersey or any particular region; it has spread, and is spreading, over the "Empire" and other States. The working of the zinc mines by intelligent, skillful and energetic minds and hands, has proven that the chief "protection" necessary to develop our mineral wealth is enlightened, practical management, and that mineral operations legitimately entered into and pursued, are no more a speculation or hazard, without tariffs even, than any other business requiring an equal outlay of capital and skill.

As the zinc interest is a new as well as important one, opening another spring of wealth and enterprise, and promising great benefits, commercial, manufacturing and sanitary, our readers will be interested in a brief statistical and general statement of the zinc resources of New Jersey, and the operations of the New Jersey Zinc Company. The zinc mines are located in the township of Franklin, Sussex County, New Jersey. They are the only mines of pure oxide of zinc known. They are mixed in their deposits with other minerals, chiefly Franklinite iron ore and manganese. Vast deposits of this Franklinite lie contiguous, similarly blended with zinc and manganese. The total extent of the two chief minerals, all of their kind located compactly in that region, is not definitely estimated, but it is immense—exhaustion for centuries to come is out of the question. It will be sufficient for the information of our readers to take the data of that portion belonging to the New Jersey Zinc Company, which has been carefully examined by Dr. Charles T. Jackson, State Assayer of Massachusetts, and United States Geologist for the mineral lands of the United States in Michigan, &c., whose estimate is verified by Major A. C. Farrington, the eminent Mining Engineer of the Zinc Company, and other eminent scientific men. Dr. Jackson gives as the amount of the Zinc Company's Franklinite, above water drainage, 1,115,468 tons; amount of zinc, 1,188,572 tons. The veins are perpendicular, and, according to the law of such veins, extend down farther below water drainage than ever plummet sounded, and are richer, if anything, as they descend, so that it is safe to say both zinc and Franklinite are inexhaustible. But if they were not so in the Zinc Company's mines, there is vast store further in reserve. It is difficult to say which of these two minerals is most valuable; both are *sui generis* and precious. As the zinc is furthest developed, we will give its analysis first:—

Oxide of zinc say - - - - -	60
Franklinite say - - - - -	20
Manganese say - - - - -	20

Total - - - - - 100